

5

Date: Monday, 1/7/2008 11:28:02 AM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 206 A/B HIGH GEAR SKIDTUBE
 Job Number : 36590
 Estimate Number : 10170
 P.O. Number :
 This Issue : 1/7/2008 S.O. No. :
 Prsht Rev. : NC Drawing Number : N/A
 First Issue : / / Type : LANDING GEAR Project Number : N/A
 Previous Run : 36589 Drawing Revision : L
 Material :
 Due Date : 1/31/2008 Qty: 1 Um: Each
 Written By :
 Checked & Approved By : 08.01.07
 Comment : Est Rev:K 05.07.14 ECN 847 & 901; Add Tow Ring and GHW
 Kit KJ/CP/JLM
 Est Rev:L 07-12-04 ECN 1080p DD verified by:

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP206-642-212 CHG004

2.0 36590A HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B



Comment: Sub-Component HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

D206-642-241 B 36590A 54

3.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

4.0 D206651041 206 A/B GHW Kit



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

1 D206-651-041 GHW Kit 1530235

1 D206-642-241(REF)

54

5.0 D2652 Bushing



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

16 D2652

Bushing 1536150

8/1/31 54

(12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Date: Monday, 1/7/2008 11:28:02 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206 A/B HIGH GEAR SKIDTUBE

Job Number: 36590

Part Number: D206642212

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

D2655

Ring



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

1 D2655

Tow Ring

1334613

SP

7.0

D26652

Saddle, RH, Fwd,Aft, Out



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

2 D2665-2

Saddle

1332623

SP

8.0

D26662

Saddle, RH, Fwd,Aft, In



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

2 D2666-2

Saddle

1334781

SP

9.0

D2712

Set Screw



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

10 D2712

Set Screw

1334628

SP

10.0

D2884

Saddle Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description

Batch

2 D2884

SADDLE SPACER

1338497

SP

11.0

D2885

Saddle Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Saddle Spacer

8/16/31 SP

(1x)

W/O:		WORK ORDER CHANGES					
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Job Number: 36590

Part Number: D206642212

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

AN341A

Bolt



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

8 AN3-41A

Bolt

M105810

SP

13.0

AN45A

Bolt



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

1 AN4-5A

Bolt

M100857

SP

14.0

AN46A

Bolt



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

12 AN4-6A

Bolt

M105810

SP

15.0

AN57A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

4 AN5-7A

Bolt

M106167

SP

16.0

AN511A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

4 AN5-11A

Bolt

M105810

SP

17.0

AN644A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

2 AN6-44A

Bolt

M102079

8/1/31

SP

(12)

W/O:		WORK ORDER CHANGES					
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Job Number: 36590

Part Number: D206642212

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

AN960JD10

Washer



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

8 AN960JD10

Washer M106167

SP

19.0

AN960JD416

Washer



Comment: Qty.: 25.0000 Each(s)/Unit Total : 25.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

25 AN960JD416

Washer M106277

SP

20.0

AN960JD516

Washer



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

8 AN960JD516

Washer M106167

SP

21.0

AN960JD616

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

4 AN960JD616

Washer M105906

SP

22.0

MS21042L3

Nut



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

8 MS21042L3

Nut (or -3) M105528

SP

23.0

MS21042L4

Nut



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick: Packing Kit

Qty Part Number

Description Batch

M105938 5/1/31 SP (1x)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: ☒ Date: 28/02/06

QA: N/C Closed: _____ Date: _____

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206 A/B HIGH GEAR SKIDTUBE

Job Number: 36590

Part Number: D206642212

Job Number:



Seq. #:

Machine Or Operation:

Description :

12 MS21042L4 Nut (or -4) _____

24.0

MS21042L6

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick: Packing Kit

Qty Part Number Description Batch

2 MS21042L6 Nut (or -6) M104394

8/1/31 SQ (12)

25.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

8/1/21 SQ (12)

26.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-642-212

Location: _____

PPP Rev: _____

8/1/4 SQ (12)

27.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

8/1/06/06

Job Completion



2008/2/05 (1)
CU

B36590A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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5

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B
 Job Number : 36590A
 Estimate Number : 10163
 P.O. Number :
 This Issue : 1/7/2008 S.O. No. :
 Prsht Rev. : NC Part Number : D206642241
 First Issue : 1/1 Type : LANDING GEAR Drawing Number : D2650 REV E
 Previous Run : 36589A Drawing Revision : E
 Material :
 Due Date : 1/31/2008 Qty: 1 Um: Each
 Written By :
 Checked & Approved By : 08.01.07
 Comment : Est Rev:M 04.12.02 Revised procedural steps KJ/JLM

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description:

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP D206-642-241 CHG003

N/A

2.0 D2620 Bent 206 Skidtube



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch
 1 D2620 Bent Tube 3" OD B34693

①

K

8-1-10

3.0 D32861 Doubler



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number Description Batch
 2 D3286-1 Doubler B33895

②

K

8-1-16

4.0 D2647 Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch
 1 D2647 Fwd Cap B35475

BE 08/01/15

5.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Deburr Fwd edge of tube

a.m 08.01.10

①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Date: Monday, 1/17/2008 11:28:30 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 36590A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

2- Remove ridge on inside of Fwd edge of tube as per Dwg D2650

a.m 08.01.10 (1)

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod m 106330

BE 08/01/15

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg 2650 from front of tube and Deburr

SL 8-1-15

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D2650

7-Open holes for Aft end cap as per Dwg D2650 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt 8167.

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

H
8-1-16

10- Drill D3286-1 doubler rivet holes in tube using # 40 drill, spot drilling doubler at the same time.

11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D2650

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D2650

15-C'sink GHW rivet holes as per Dwg D2650

6.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

8 08/01/16 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Date: Monday, 1/7/2008 11:28:30 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 36590A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

7.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open crossbolt holes to Ø0.3125" as per Dwg D2650

2-Drill pilot holes using DT8028-3, then open to Ø0.297" as per Dwg D2650. Open Aft cap hole #6.

3-Deburr tube and blow out chips from inside the tube

H
7-1-16

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

H 7-1-16

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

Q.M. 08/01/16 (11)

10.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open holes to finished size as per Dwg D2650, D2650-3 Drilling Detail (without cutting fluid)

2-C'sink crossbolt spacer holes as per Dwg D2650(without cutting fluid)

3-Deburr and blow out all chips from inside the tube

H
7-1-16

11.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

08/01/16 (41)

12.0

CR3212404

Cherry Rivet



Comment: Qty.: 52.0000 Each(s)/Unit Total: 52.0000 Each(s)

Pick:

Qty Part Number

Description Batch

52 CR3212-4-04 Rivet

MD4625

(56)

H 7-1-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 36590A

Part Number: D206642241

Job Number:



Seq. #

Machine Or Operation:

Description :

13.0

D26543

206 I-Beam (Web)



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:



Qty Part Number

Description Batch

1 D2654-3

Web

B35992

①

M 8-1-16

14.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Locate, install and rivet doublers as per Dwg D2650. Micro-shave rivets as required

M 8-1-16

2-Bond D2654-3 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting

Start Date: 8-1-16

Time: 5:35

Finish Date: 08/01/17

Time: 7:25 AM

Pick:

Qty Part Number

Description Batch

A/R Sikaflex-291

M05469

Sikaflex expire date:

8-1-30

M

8-1-16

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/01/17

④

16.0

D2649

Crossbolt Spacer



Comment: Qty.: 18.0000 Each(s)/Unit Total: 18.0000 Each(s)

Pick:

Qty Part Number

Description Batch

18 D2649

Crossbolt spacer

B36013

BE 08/01/21

17.0

D32863

Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3286-3

Spacer

B35048

BE 08/01/25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 36590A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description:

18.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

Qty Part Number Description Batch

A/R Aluminum Rod

M106330 BE 08/06/21

2-Grind welds flush as per Dwg D2650.

A.M 08.01.22 ①

3-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D2650. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/RSS Rod

NONE BE 08/11/25

4-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D2650. Deburr

SL 8-1-28

19.0

CCR264SS33

Cherry Rivet



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 CCR264SS3-3 Rivets

106825

SL 8-1-28

20.0

M7885343

Rivet



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 M7885/3-4-3 Rivets

102515

SL 8-1-28

21.0

D2680041

Nut Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2680-041

Nut Plate

31699

SL 8-1-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Job Number: 36590A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

22.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install D2680-041 Nut Plate as per Dwg D2650

SL 8-1-28

23.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

1D 08-01-29 (1)

24.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

2 08/01/29 (4)

25.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Pressure wash as per QSI 005

HP

08-01-29 (X1)

26.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref. 4.3.5.1) as per QSI 005 4.3. Make sure Nut Plate Thread is protected using paint screw, and mask GHW studs.

M 106379

08-01-29 (1)

27.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

M. 08/01/30 (1X)

28.0

D26483

Wearpad



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

4 D2648-3

Wearpad

B 33992

M. 08/01/30

29.0

D265613

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2656-13

Wearshoe

B 35207

M. 08/01/30

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 36590A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

30.0

D265621

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2656-21

Wearshoe

B 33089

M. J.

31.0

D265633

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2656-33

Wearshoe

B 29452

M. J.

32.0

D34291



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D3429-1

Wearpad

B 34609

M. J.

33.0

ALS41032130

Insert



Comment: Qty.: 44.0000 Each(s)/Unit Total : 44.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

44 ALS4-1032-130 Inserts

or (see QSI 017)

M 105729

M. J.

34.0

AN960JD10L

Washer



Comment: Qty.: 46.0000 Each(s)/Unit Total : 46.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

46 AN960JD10L

Washer

M 104885

08/01/30
M. J.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 1/7/2008 11:28:30 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 36590A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

35.0

MS27039108

Screw



Comment: Qty.: 46.0000 Each(s)/Unit Total : 46.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

46 MS27039-1-08

Screw

M 106589

M. J.

36.0

D26511

Plug



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

18 D2651-1

Plugs

B 36153

M. J.

37.0

D26513

O-Ring



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

18 D2651-3

O-Rings

B 36141

M. J.

38.0

MS27039406

Screw



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 MS27039-4-06

Screw

M 15194

M. J.

39.0

AN960JD416

Washer



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 AN960JD416

Washer

M 105426

M. J.

40.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1]

1- Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate.

A/R Sikaflex-291

M 105585

M. J. 08/01/30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 1/7/2008 11:28:30 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 36590A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

Sikaflex expire date:

08/07

(1X)

2-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D2650 (D2650-3 detail). Clean excess adhesive.

3-Install MS27039-4-06 Screw as per DEO 9153.

M-L 08/01/30

41.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2646

Aft Cap

B32427

M-L

42.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive

A/R Sikaflex-291

Sikaflex expire date:

M105585
08/07

2-Wing Walk as per Dwg D2650-3 and QSI 005 4.4

Batch: M106332

FL 08/01/30 (1)

43.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

44.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

45.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206664241 IF APPLICABLE

Location:

PPP Rev:

PP 36590

8/2/4 50 (1X)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: LD Date: 28/07/06
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 1/7/2008 11:28:30 AM

User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH GEAR SKIDTUBE ASSEMBLY 206 A/B

Job Number: 36590A

Part Number: D206642241

Job Number:



Seq. #:

Machine Or Operation:

Description :

46.0

QC21

FINAL INSPECTION/W/O RELEASE



①

Comment: FINAL INSPECTION/W/O RELEASE

2008/02/06

Job Completion



2008/2/05

①

4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN <i>AP</i>	DRAWN BY <i>AP</i>	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED <i>PH</i>	APPROVED <i>PH</i>	DRAWING NO. D2650	REV. E SHEET 1 OF 5
DATE 06.03.30		TITLE 206/407 SKIDTUBE ASSEMBLIES SCALE NTS	
A	97.03.25	NEW ISSUE	
B	97.06.26	AS MANUFACTURED CHANGES	
C	97.10.29	CHANGE HOLE PATTERN AND FRONT END	
D	04.05.17	REDRAW; INCORP. DE09136/9153/9163 MOD GROUND HNDLNG ON D2650-1/-3	
E	06.03.30	RMV C'BORE, CHG DRILL, ADD CHAMFER	

RELEASED
16 04 17 *PH*

Qty -1	Qty -3	Qty -5	Qty -7	Part Number	Description
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
16	17	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

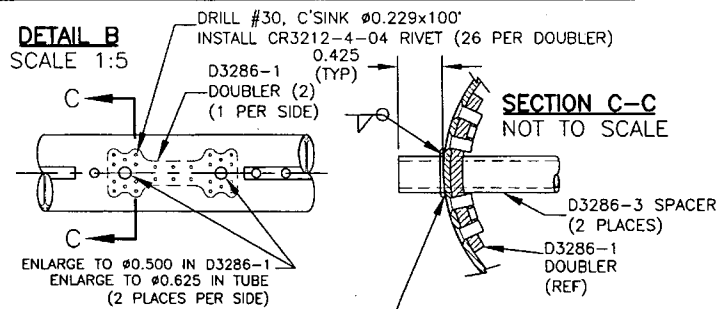
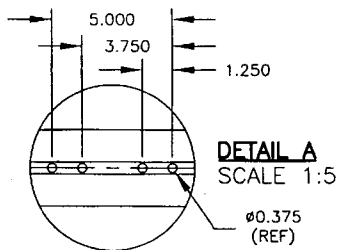
NOTES

- 1) WELD PER DART QSI 004
- 2) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 3) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 4) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 5) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 6) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 7) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

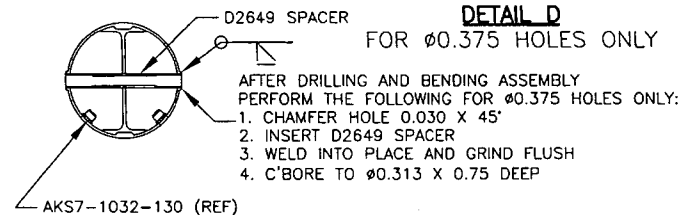
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WORK ORDER
NO. 36590A

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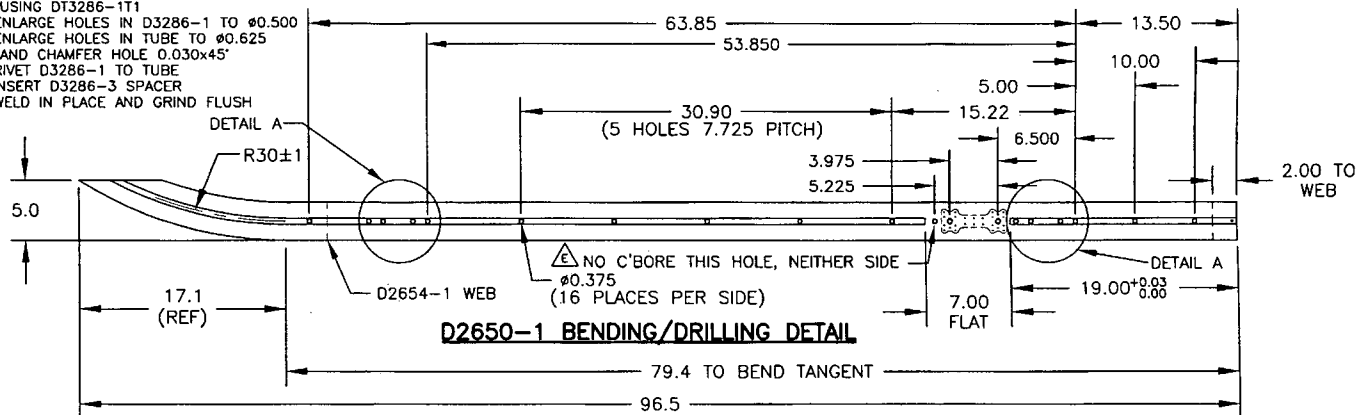
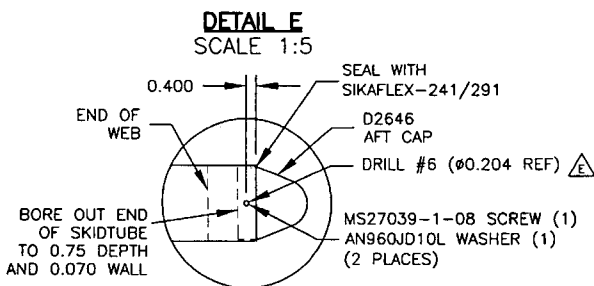
SECTION C-C NOT TO SCALE



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06.04.17

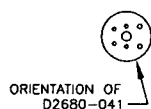
- TO INSTALL D3286-1/-3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH ROUND TUBE
 2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
 3. ENLARGE HOLES IN D3286-1 TO 0.500
 4. ENLARGE HOLES IN TUBE TO 0.625 AND CHAMFER HOLE 0.030x45
 5. RIVET D3286-1 TO TUBE
 6. INSERT D3286-3 SPACER
 7. WELD IN PLACE AND GRIND FLUSH



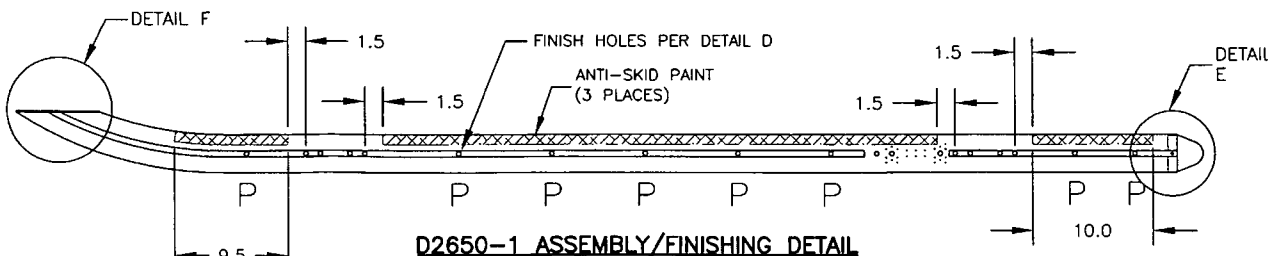
DETAIL F (NOT TO SCALE)

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS NECESSARY)
4. WELD D2647 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH



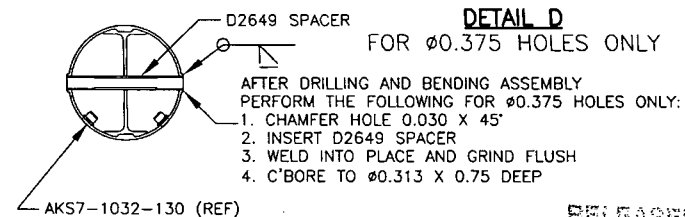
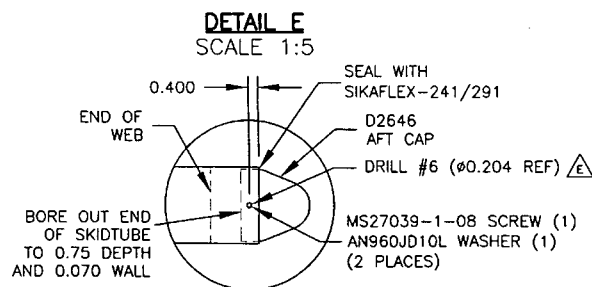
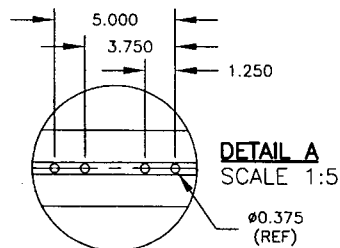
REMOVE RIDGE ON INSIDE OF SKIDTUBE LEAVE 0.070 MIN.



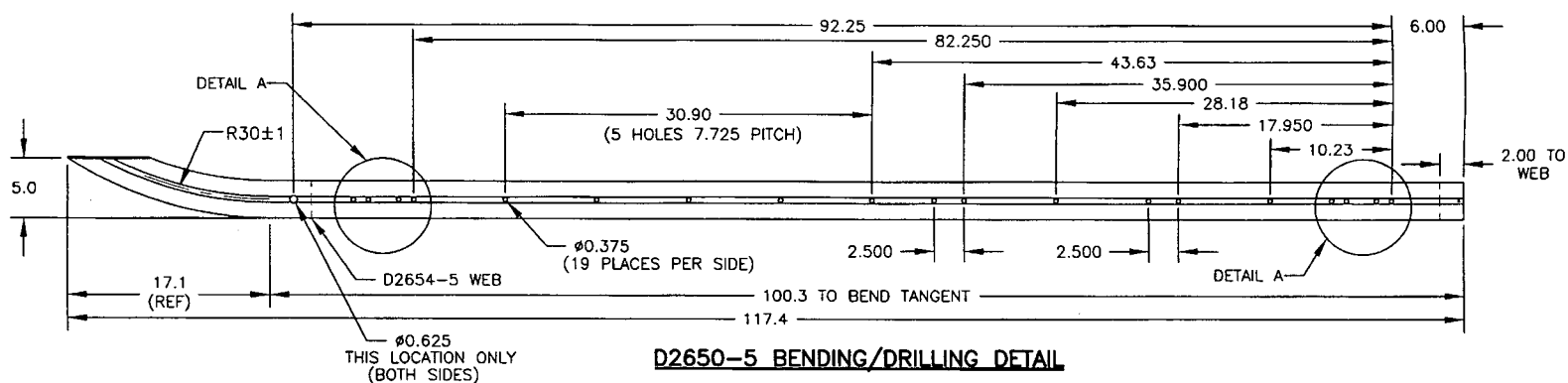
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		DATE	06.03.30	TITLE		SKIDTUBE	SCALE 1:10





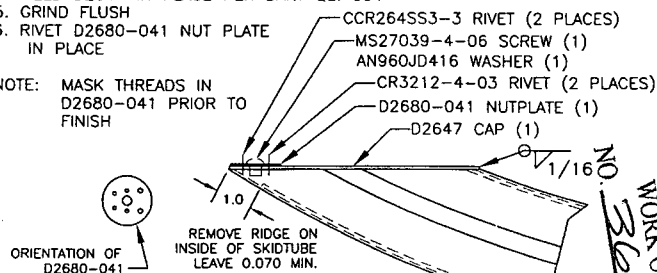
RELEASED
20417



DETAIL F (NOT TO SCALE)

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS NECESSARY)
4. WELD D2647 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH



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D2650-5 BENDING/DRILLING DETAIL

D2650-5 ASSEMBLY/FINISHING DETAIL

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CHECKED <i>PH</i>	APPROVED <i>PH</i>	DRAWING NO. D2650		SHEET 4 OF 5	
DATE 06.03.30		TITLE SKIDTUBE		SCALE 1:10	

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NO. 137

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name Barclay E
Joint Welding Procedure GTAW
Part number and Job number DACB 612 341 / B36135

TEST WELDS REQUIRED

BASE METAL Aluminum WELDING PROCESS ts
Penetration Complete ☐ Partial ☒ Single Weld ☒ Double Weld ☐
Current AC ☒ DC ☐ Backing YES ☐ NO ☒

	Position	Vertical	Down <input type="checkbox"/>	Up <input type="checkbox"/>
Sheet Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	3G <input type="checkbox"/>	4G <input type="checkbox"/>
Tube Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	5G <input type="checkbox"/>	6G <input type="checkbox"/>
Sheet Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	3F <input type="checkbox"/>	4F <input type="checkbox"/>
Tube Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	4F <input type="checkbox"/>	5F <input type="checkbox"/>

Crossbolt Spacer Welded into Skidtube

TEST RESULTS

Visual Pass ☒ Fail ☐
Penetration Pass ☒ Fail ☐
Crossbolt Spacer Pass ☒ Fail ☐

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Date of Test Coupon 08-01-07 Qualifier Del. Duval